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PATENT  
Attorney Docket No. UPITT-09379

3762

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Samir F. Saba

Serial No.: 10/535,529

Filed: 05/18/05

Group No.: 3762

Examiner:

Entitled: **Device And Method To Discriminate Between Supraventricular Tachycardias And Ventricular Arrhythmias**

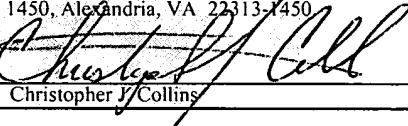
**INFORMATION DISCLOSURE  
STATEMENT TRANSMITTAL**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)(1)(i)(A)**

I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is, on the date shown below, being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: November 22, 2006

By: 

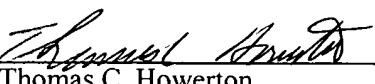
Christopher J. Collins

Sir or Madam:

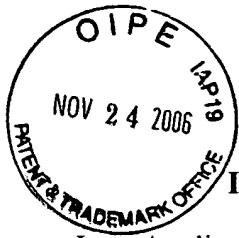
Enclosed please find an Information Disclosure Statement and Form PTO-1449, including copies of the references contained thereon, for filing in the U.S. Patent and Trademark Office.

Applicant's believe no fee is required since this filing is within the three months of filing of the application or before the issuance of any office action, but if the examiner believes otherwise the Commissioner is hereby authorized to charge any additional fee or credit overpayment to our Deposit Account No. 08-1290. **An originally executed duplicate of this transmittal is enclosed for this purpose.**

Dated: November 22, 2006

  
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PATENT  
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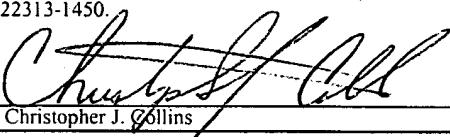
Entitled: **Device And Method To Discriminate Between Supraventricular Tachycardias And Ventricular Arrhythmias**

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)(1)(i)(A)

I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is, on the date shown below, being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA. 22313-1450.

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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir or Madam:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

The following printed publications are referred to in the body of the specification:

- U.S. Patent No. 5,143,089 to Alt;
- U.S. Patent No. 6,076,014 to Alt;
- Barold *et al.*, "Prospective evaluation of new and old criteria to discriminate between supraventricular and ventricular tachycardia in implantable defibrillators," *Pacing Clin Electrophysiol.*, 21:1347-1355 (1998);
- Buxton *et al.*, "Current approaches to evaluation and management of patients with ventricular arrhythmias," *Med. Health R I.*, 84(2):58-62 (2001)<sup>1</sup>;
- Finelli *et al.*, "Effects of increased heart rate and sympathetic tone on intraventricular electrogram morphology," *Am. J Cardiol.* 68:1321-1328 (1991);

<sup>1</sup>We were unable to obtain this reference, but if the examiner requests a copy we will attempt to obtain it.

- Gold *et al.*, "A new defibrillator discrimination algorithm utilizing electrogram morphology analysis," *Pacing Clin Electrophysiol.* 22:179-182 (1999);
- Lampert *et al.*, "Management of arrhythmias," *Clin Geriatr Med.* 16(3):593-618 (2000);
- McAlister *et al.*, "Atrial electrogram analysis: antegrade versus retrograde," *Pace* 11:1703-1707 (1988);
- Pannizo *et al.*, "Discrimination of antegrade and retrograde atrial depolarization by electrogram analysis," *Am. Heart J.* 112:780-786 (1986);
- Ross *et al.*, "The effect of exercise on the atrial electrogram voltage in young patients," *PACE*, 14:2092-2097 (1991);
- Schaumann *et al.*, "Enhanced detection criteria in implantable cardioverter-defibrillator to avoid inappropriate therapy," *Am J Cardiol.*, 78:42-50 (1996);
- Tanaka S., "An overview of fifth-generation implantable cardioverter defibrillator," *Ann Thorac Cardiovasc Surg.*, 4:303-311 (1998)<sup>2</sup>;
- Thompson *et al.*, "Ventriculoatrial conduction metrics for classification of ventricular tachycardia with 1:1 retrograde conduction in dual chamber sensing implantable cardioverter defibrillators," *J Electrocardiol.*, 31: 152-156 (1988);
- Timmis *et al.*, "Discrimination of antegrade from retrograde atrial electrograms for physiologic pacing," *PACE* 11:130-140 (1988);
- Throne *et al.*, "Discrimination of retrograde from antegrade atrial activation using intracardiac electrogram waveform analysis," *Pacing Clin Electrophysiol.*, 12:1622-1630 (1989);
- Wainwright *et al.*, "Ideal atrial lead positioning to detect retrograde atrial depolarization by digitization and slope analysis of the atrial electrogram," *PACE* 7:1152-1158 (1984); and
- Woodroffe M., Probability with applications, McGraw-Hill, New York pp. 229-239 (1975).

Applicant has become aware of the following printed publications through the International Search Report issued November 18, 2004 in the related PCT application WO 2004/045385 A2:

- U.S. Patent No. 5,562,708 to Combs *et al.*;
- U.S. Patent No. 5,383,910 to den Dulk; and
- U.S. Patent No. 5,476,482 to Lu.

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<sup>2</sup>We were unable to obtain this reference, but if the examiner requests a copy we will attempt to obtain it.

The following printed publications were cited by an examiner in an office action of a priority application, serial No. 10/717,248 filed 11-19-2003:

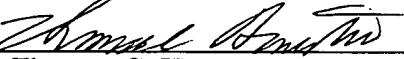
- U.S. Patent No. 6,466,824 to Struble.
- U.S. Patent No. 6,813,518 to Küpper.
- U.S. Patent No. 6,950,701 to Begemann *et al.*.
- U.S. Patent Application No. 2004/0059237 to Narayan *et al.*.

Applicant has become aware of the following printed publications which may be material to the examination of this application:

- U.S. Patent No. 5,411,530 to Akhtar.
- Saba *et al.*, "Testing of a new real-time computer algorithm as an aid to pace mapping and entertainment with concealed fusion," *Am. J. Cardiol.* 87:20-24 (2001); and
- Saba *et al.*, "Use of correlation waveform analysis in discrimination between anterograde and retrograde atrial electrograms during ventricular tachycardia," *J. Cardiovascular Electrophysiology*, 12(2):145-149 (2001).

This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art.

Dated: November 22, 2006



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FORM PTO-1449 (Modified)	NOV 24 2006	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.: UPITT-09379	Serial No.: 10/535,529
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use Several Sheets If Necessary) (37 CFR § 1.98(b))			Applicant: Samir F. Saba	
			Filing Date: 05/18/05	Group Art Unit:

**U.S. PATENT DOCUMENTS**

Examiner Initials	Cite No.	Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
	1	5,143,089	09-01-1992	Alt	607	121	05-01-1990
	2	5,383,910	01-24-1995	den Dulk	607	14	02-19-1993
	3	5,411,530	5-02-1995	Akhtar	607	14	11-13-1992
	4	5,476,482	12-19-1995	Lu	607	9	04-12-1994
	5	5,562,708	10-08-1996	Combs <i>et al.</i>	607	4	04-21-1994
	6	6,076,014	06-13-2000	Alt	607	4	08-01-1997
	7	6,466,824	10-15-2002	Struble	607	115	4-23-2004
	8	6,813,518	11-02-2004	Kupper	607	14	4-30-2001
	9	6,950,701	9-27-2005	Begemann <i>et al.</i>	607	9	12-21-2001
	10	2004/0059237	3-25-2004	Narayan <i>et al.</i>	600	509	12-18-2002

**OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)**

11	Barold <i>et al.</i> , "Prospective evaluation of new and old criteria to discriminate between supraventricular and ventricular tachycardia in implantable defibrillators," <i>Pacing Clin Electrophysiol.</i> , 21:1347-1355 (1998)
12	Finelli <i>et al.</i> , "Effects of increased heart rate and sympathetic tone on intraventricular electrogram morphology," <i>Am. J Cardiol.</i> 68:1321-1328 (1991)
13	Gold <i>et al.</i> , "A new defibrillator discrimination algorithm utilizing electrogram morphology analysis," <i>Pacing Clin Electrophysiol.</i> 22:179-182 (1999)
14	Lampert <i>et al.</i> , "Management of arrhythmias," <i>Clin Geriatr Med.</i> , 16(3):593-618 (2000)
15	McAlister <i>et al.</i> , "Atrial electrogram analysis: antegrade versus retrograde," <i>Pace</i> 11:1703-1707 (1988)
16	Pannizo <i>et al.</i> , "Discrimination of antegrade and retrograde atrial depolarization by electrogram analysis," <i>Am. Heart J.</i> 112:780-786 (1986)
17	Ross <i>et al.</i> , "The effect of exercise on the atrial electrogram voltage in young patients," <i>PACE</i> , 14:2092-2097 (1991)
18	Saba <i>et al.</i> , "Testing of a new real-time computer algorithm as an aid to pace mapping and entertainment with concealed fusion," <i>Am. J. Cardiol.</i> 87:20-24 (2001)
19	Saba <i>et al.</i> , "Use of correlation waveform analysis in discrimination between anterograde and retrograde atrial electrograms during ventricular tachycardia," <i>J. Cardiovascular Electrophysiology</i> , 12(2):145-149 (2001)
20	Schaumann <i>et al.</i> , "Enhanced detection criteria in implantable cardioverter-defibrillator to avoid inappropriate therapy," <i>Am J Cardiol.</i> , 78:42-50 (1996)
21	Thompson <i>et al.</i> , "Ventriculoatrial conduction metrics for classification of ventricular tachycardia with 1:1 retrograde conduction in dual chamber sensing implantable cardioverter defibrillators," <i>J Electrocardiol.</i> , 31: 152-156 (1988)
22	Timmis <i>et al.</i> , "Discrimination of antegrade from retrograde atrial electrograms for physiologic pacing," <i>PACE</i> 11:130-140 (1988)
23	Throne <i>et al.</i> , "Discrimination of retrograde from antegrade atrial activation using intracardiac electrogram waveform analysis," <i>Pacing Clin Electrophysiol.</i> , 12:1622-1630 (1989)
24	Wainwright <i>et al.</i> , "Ideal atrial lead positioning to detect retrograde atrial depolarization by digitization and slope analysis of the atrial electrogram," <i>PACE</i> 7:1152-1158 (1984)
25	Woodroffe M., <i>Probability with applications</i> , McGraw-Hill, New York pp. 229-239 (1975)

Examiner:	Date Considered:
<b>EXAMINER:</b>	Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.